REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

The specification has been amended to place the subject application in better form. A new abstract has also been presented in accordance with preferred practice. No new matter has been added by these changes.

Claims 1 and 3-24 are presented for consideration. Claim 2 has been canceled without prejudice or disclaimer. Claims 1, 15, 17, 18, 21 and 22 are independent. Claims 1, 3, 8, 13, 15-18 and 20-24 have been amended to clarify features of the invention. Support for these changes can be found in the application, as filed. Therefore, no new matter has been added.

Applicants note that the Examiner has made final the restriction requirement previously set forth. Claims 17-22, withdrawn from consideration as being directed to non-elected inventions, have been retained in this application in order to preserve Applicants' rights. Applicants have also amended these claims along the lines of the amendments made to independent claims 1 and 15.

Applicants request favorable reconsideration and withdrawal of the rejections set forth in the above-noted Office Action.

Claim 23 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner noted a minor informality in that claim. To expedite prosecution, claim 23 has been amended in light of the Examiner's comments.

Turning now to the art rejections, claims 1, 4, 6 and 9-14 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,373,515 to Wakabayashi et al. Claims 1, 6-8, 15 and 16 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,838,426 to Shinonaga et al. Claims 1, 4 and 5 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,142,543, also to Wakabayashi et al. Claims 1-3 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,434,173 to Tuganov et al. Claims 15, 23, and 24 were rejected under 35 U.S.C. § 103 as being unpatentable over the Tuganov et al. patent in view of U.S. Patent No. 6,252,650 to Nakamura. Applicants submit that the cited art, whether taken individually or in combination, does not teach many features of the present invention as previously recited in claims 1-16, 23 and 24. Therefore, these rejections are respectfully traversed. Nevertheless, Applicants submit that these claims, as now presented, amplify the distinctions between the present invention and the cited art.

In one aspect of the invention, independent claim 1 recites a laser oscillation apparatus that includes wavelength change means for driving a wavelength selection element and changing an oscillation wavelength of a laser beam to a target value and calculation means for calculating a driving amount of the wavelength selection element on the basis of the target value and a drift amount of the oscillation wavelength generated immediately after oscillation starts. The wavelength change means drives the wavelength selection element on the basis of the calculated driving amount and the calculated drift amount.

In another aspect of the invention, independent claim 15 recites an exposure apparatus using a laser oscillation apparatus as a light source. The laser oscillation apparatus includes those features discussed above with respect to independent claim 1.

In other aspects of the invention, independent claim 17 recites a semiconductor device manufacturing method of manufacturing a semiconductor device by using an exposure apparatus, independent claim 18 recites a semiconductor device manufacturing method, independent claim 21 recites a semiconductor manufacturing factory and independent claim 22 recites a maintenance method for an exposure apparatus installed in a semiconductor manufacturing factory. Each of these claims recites, among other features, the arrangement of the wavelength change means and the calculation means as discussed above with respect to independent claim 1.

By such an arrangement, in the present invention, the wavelength selection element can be driven so as to cancel an oscillation wavelength error amount or drift amount generated, for example, by chirping that may occur immediately after oscillation starts. In this manner, the present invention assures that a laser beam having a desired oscillation wavelength can always be oscillated.

Applicants submit that the cited art does not teach or suggest such features of the present invention as recited in the independent claims.

The Examiner relies on the Wakabayashi et al. '515 patent, the Shinonaga et al. patent, the Wakabayashi et al. '543 patent, and the Tuganov et al. patent for teaching laser oscillation apparatus that include setting an oscillation wavelength of a laser beam to a desired value by driving a wavelength selection element.

Applicants submit, however, that these patents do not teach or suggest the salient features of Applicants' present invention as recited in the independent claims of calculating a drift amount of an oscillation wavelength generated immediately after oscillation starts to drive a wavelength selection element on the basis of, for example, the calculated drift amount. Therefore, Applicants submit that those patents do not teach or suggest the salient features of Applicants' present invention, as recited in the independent claims.

Applicants further submit that the Nakamura patent does not cure the deficiencies noted above with respect to the Tuganov et al. patent, for example.

The Examiner relies on the Nakamura for showing the use of a laser light source in an exposure apparatus. Applicants submit, however, that the Nakamura patent, as with the remaining art cited, including the Tuganov et al. patent, fails to teach or suggest the salient features of Applicants' present invention as recited in the independent claims, which have been discussed above. Therefore, the Nakamura patent adds nothing to the teachings of the Tuganov et al. patent that would render obvious, Applicants' present invention recited in the independent claims.

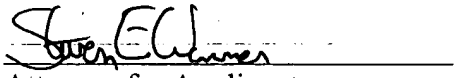
For the foregoing reasons, Applicants submit that the present invention, as recited in independent claims 1, 15, 17, 18, 21 and 22, is patentably defined over the cited art, whether that art is taken individually or in combination.

The dependent claims also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicants further submit that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



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